Washington State Department of Health

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West Nile Virus Newsletter

For the third year, the Department of Health (DOH) is using this electronic newsletter as a regular communication tool to help keep its partners informed about West Nile virus (WNV). The newsletter will be provided every two weeks throughout the warmer peaks of the mosquito season and less frequently during the colder, non-peak mosquito periods.

Presentations from the National Conference on West Nile Virus

The slide presentations from the Sixth National Conference on West Nile Virus in the United States have been posted at the Centers for Disease Control and Prevention, West Nile Virus Web Page at www.cdc.gov/ncidod/dvbid/westnile/conf/February_2005.htm.

An outstanding variety of presentations were separated into topic sessions. The sessions were: surveillance, epidemiology/clinical studies, field biology/ecology, virology and laboratory diagnosis, communication/behavior, and mosquito control. And a panel discussion session focused on sustaining surveillance, laboratory, prevention and mosquito control programs.

Horse Owners Urged to Pursue West Nile Virus Vaccination

Washington State Department of Agriculture, News Release, March 22, 2005

OLYMPIA — With the season turning to spring this weekend, mosquitoes can't be far away. State Veterinarian Dr. Leonard Eldridge advises horse owners to take precautions against mosquitoes and a disease many mosquito species carry, West Nile virus.

A bite by an infected mosquito can result in infection of horses, humans and many species of birds. Horses in Oregon and Idaho last year were diagnosed with West Nile virus (WNV), while Washington was the only state in the lower 48 U.S. that did not detect WNV activity. It remains a threat coast-to-coast, however.

"Now is the time to vaccinate your horse against the disease," Eldridge said. "If horses are being vaccinated for the first time, they need a series of two doses, three to six weeks apart. If the horse was previously vaccinated with the series, it needs an annual booster before the beginning of the mosquito season. Horse owners should contact their private veterinarians for vaccination and other health information."

The best way to minimize the threat of WNV is to control mosquitoes and prevent horses from being exposed to adult mosquitoes. Some protective measures include changing the water in livestock troughs, fountains, birdbaths and wading pools weekly during mosquito season. Owners may also consider draining or treating stagnant water, mowing grass and weeds, putting up screens to protect homes and stables from mosquitoes, and putting horses in stables at night. Repellents and insecticides should be used only according to label directions, and it is important not to drain or fill wetlands, as they provide benefits that far outweigh the small chance of contracting WNV.

Veterinarians and horse owners should alert the State Veterinarian's office if they observe unusual signs of illness in any equine, to include horse, mules, ponies and donkeys. Signs of West Nile virus in these animals can include loss of appetite, listlessness, stumbling, lack of coordination, weakness of limbs, partial paralysis and death. The incubation period in a horse appears to be from three to 15 days. While many exposed equines show no signs of illness, WNV can be fatal in about 30 percent of the cases. Horses contract the disease from carrier mosquitoes and are not contagious to other horses or people.

The entire news release can be viewed at http://agr.wa.gov/News/2005/05-11.htm.

West Nile Virus Detected in 19 California Counties

California Department of Health Services, Press Release, March 17, 2005

SACRAMENTO – Heavy rains and warm temperatures have led to the early arrival of mosquitoes and West Nile virus (WNV) in California, State Public Health Officer Dr. Richard J. Jackson announced today. To date, WNV has been detected in 19 of California's 58 counties. No human cases have yet been reported in 2005.

"This is a critical time for mosquito prevention," Jackson said. "Residents should eliminate standing water around their homes where mosquitoes might breed, keep their pools in good working order and report dead birds."

As of today, 32 dead birds from the following counties have tested positive for WNV: Alameda, Contra Costa, El Dorado, Fresno, Humboldt, Kern, Kings, Los Angeles, Orange, Placer, Sacramento, Santa Clara, Santa Cruz, Solano, Sonoma, Stanislaus, Tulare and Yolo counties. WNV has also been detected in a sentinel chicken in San Bernardino County and mosquitoes in Orange County.

"Early detection is the key to preventing the spread of West Nile virus," Jackson said. "We anticipate that there will be an increase in West Nile virus activity in Northern and Central California this year. "

Jackson also urged all horse owners to consult their veterinarians about proper and timely WNV vaccinations for their animals. In 2004, 540 equine WNV infections were reported statewide, most of which involved horses that were not vaccinated.

"Although California experienced widespread West Nile virus transmission last year, we believe that the number of human cases would have been greater without the aggressive control

measures conducted by state and local agencies," Jackson said. "Personal protection measures taken by the public last year were significant in minimizing illness and death from West Nile virus. I urge all residents to be vigilant in avoiding mosquito bites."

Last year, there were a total of 829 human WNV infections, including 27 deaths, reported from 23 counties in California. The virus was detected in all 58 counties.

View the complete press release and get the latest WNV activity information in California at www.westnile.ca.gov/.

EPA Recommends Better Labels for Mosquito Control Products

U.S. Environmental Protection Agency, News Brief, March 9, 2005

EPA is issuing seven new recommendations to pesticide registrants and others to improve label statements for pesticide products used to control adult mosquitoes. The recommendations pertain to pesticide products applied by ultra-low volume aerial or ground application methods. The recommendations promote consistency and clarify labeling statements that may have been unclear to users. The improvements will help public health mosquito control officials use the most effective techniques while ensuring that use of these products will not pose unreasonable risks to public health or the environment. The recommendations are:

(1) adult mosquito control applications should be limited to trained personnel;
(2) mosquito control directions and precautions should be clearly distinguished from any other use directions allowed on the label, such as agricultural crops;
(3) label precautions and directions should be revised as needed to make hazards to aquatic life as clear as possible, and also to allow the application of these products over or near a body of water allowable under some circumstances;
(4) users should consult with the state or tribal agency for pesticide regulation to determine if permits or other regulatory requirements exist;
(5) labels should specify a spectrum of spray/fog droplet sizes, and indicate that droplet size should be determined according to directions from equipment manufacturers or other appropriate sources;
(6) precautionary language to protect bees should have a provision to allow mosquito control applications in order to respond to threats to public health which are identified by health or vector control agencies on the basis of evidence of disease organisms or diseases cases in animals or humans; and
(7) labels for adult mosquitoes should include limits on timing and number of applications to the same location.

EPA worked with state agencies to develop initial recommendations and presented them at two public meetings of the Pesticide Program Dialogue Committee, an advisory committee to EPA representing a full spectrum of interests, including pesticide manufacturers, public health agencies, academia, user groups and public interest groups. In April 2004, EPA issued draft recommendations for public comment. To view the seven new recommendations, go to: http://www.epa.gov/PR_Notices/.

Research

Centers for Disease Control and Prevention, Emerging Infectious Diseases, Volume 11, Number 3 – March Issue

West Nile Virus Risk Assessment and the Bridge Vector Paradigm. A.M. Kilpatrick et al.
http://www.cdc.gov/ncidod/eid/vol11no03/04-0364.htm

Abstract: In the northeast United States, control of West Nile virus (WNV) vectors has been unfocused because of a lack of accurate knowledge about the roles different mosquitoes play in WNV transmission. We analyzed the risk posed by 10 species of mosquitoes for transmitting WNV to humans by using a novel risk-assessment measure that combines information on the abundance, infection prevalence, vector competence, and biting behavior of vectors. This analysis suggests that 2 species (*Culex pipiens* L. and *Cx. restuans* Theobald [Diptera: Cilicidae]) not previously considered important in transmitting WNV to humans may be responsible for up to 80% of human WNV infections in this region. This finding suggests that control efforts should be focused on these species which may reduce effects on nontarget wetland organisms. Our risk measure has broad applicability to other regions and diseases and can be adapted for use as a predictive tool of future human WNV infections.

Community Comments

Let us hear your comments on this newsletter, your needs, or things you would like to see, by sending them to Maryanne Guichard, 360.236.3391 or maryanne.guichard@doh.wa.gov

WNV Web Resources

Washington State Department of Health www.doh.wa.gov/wnv
Center for Disease Control and Prevention www.cdc.gov/ncidod/dvbid/westnile/
Cornell University, Environmental Risk Analysis Program environmentalrisk.cornell.edu/WNV/
Washington State University Cooperative Extension wnv.wsu.edu/
Washington State Department of Agriculture
agr.wa.gov/FoodAnimal/AnimalHealth/Diseases/WestNileVirus/default.htm

Article Submission

We are interested in receiving articles for future publications of the WNV Newsletter. Please submit articles to Ben Hamilton, benjamin.hamilton@doh.wa.gov.

DOH Contact List for West Nile Virus

General Public Toll-Free Information Line 1.866.78VIRUS

To subscribe to this newsletter and for Publications: Brochures/Response Plan/Fact Sheets
Cyndi Free, 360-236-3384, or cyndi.free@doh.wa.gov.

Surveillance: Mosquito
Jo Marie Brauner, 360.236.3064, or jomarie.brauner@doh.wa.gov.

Animal Surveillance: Dead bird and horse surveillance, case reporting, and laboratory assistance, as well as general WNV response

Tom Gibbs, 360.236.3060, or tom.gibbs@doh.wa.gov.

Aquatic Mosquito Control National Pollutant Discharge Elimination System (NPDES) General Permit: Training, technical assistance

Ben Hamilton, 360.236.3364, or benjamin.hamilton@doh.wa.gov.

WNV in Humans: Clinical information, case reporting, and laboratory testing

Call your local health jurisdiction or DOH Communicable Disease Epidemiology, (206) 418-5500 or (877) 539-4344.

Assistance with news releases and media response

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